



Product Name: **Aquaguard Part A & Part B**
Reviewed Date: **January 2010**

Health & Safety Data Sheet Reference: **FT104**

1- IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product name: **AQUAGUARD PART A**

Supplier: Floortech Products
Goods Yard
Derby Road
Belper
Derbyshire
DE56 1UX

Phone: 01773 828111

Fax: 01773 828333

Product Description: Water Based Polyurethane Seal

2- COMPOSITION/INFORMATION AND INGREDIENTS

Hazardous Ingredients:
(Dimethylamino) ethanol: 0.5%
N-Methyl pyrrolidone: 7.5%
Triethylamine: 0.7%

3- HAZARD IDENTIFICATION

Hazard Identification:- None

Special Hazard Identification for Human and Environment :- None

4- FIRST AID MEASURES

Eye Splashes: Flush the affected eye with clean running water for at least 10 minutes and seek medical advice.

Skin Exposure: If soreness or irritation occurs as a result of skin exposure remove contaminated clothing and wash skin thoroughly with soap and water. Wash clothing before use. If symptoms persist seek medical advice.

Ingestion (Swallowing): If material is accidentally swallowed do not induce vomiting. Drink large amounts of water and seek medical advice. If patient vomits, turn into recovery position and seek medical advice.

Inhalation: Move the patient to fresh air. If the patient is unconscious, place in the recovery position and seek medical attention immediately.

This information should be taken with the patient when seeking medical advice

Do not give victim anything to drink if he is unconscious

5- FIRE FIGHTING MEASURES

Non flammable water based liquid.

Use dry powder, watermist, CO₂, or foam.

Fire fighters should wear self-contained breathing apparatus.





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6- ACCIDENTAL RELEASE MEASURES

Spillages must be contained with an inert, non-combustible material and prevented from entering surface drains. Dispose of according to Local Regulations.

7- HANDLING AND STORAGE

The product must be protected from freezing and temperatures above 50 degrees Centigrade.

When handling avoid contact with eyes and skin.

Wash hands before eating or leaving work.

All chemical preparations should be stored securely where they cannot be interfered with or used by unauthorized persons.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION

Suitable protection should be worn to prevent contact with eyes and skin.

Exposure controls:

Occupational exposure controls:

Hand protection: All types of protective gloves are suitable to protect the hands during use, product does not attack rubber, latex nitrile or other similar materials. Suitable work-wear or overalls should be used to protect clothing and skin.

Eye protection: Safety glasses/goggles with side shields or face shield should be used when handling this material to protect from liquid droplets or splashes.

Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at end of work. Keep working clothes separate. Immediately remove contaminated clothing.

Environmental exposure controls:

No specific environmental legislation applies, but good practice should be followed. The product should not be allowed to spill or run into surface waters.

9- PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Slightly Yellow Liquid
Odour:	Slight odour of amine
Density:	1.05 gm/cm ³
Flash Point:	Above 100°C
Solubility:	Miscible in all proportions
Ignition Temperature:	Not applicable

10- STABILITY AND REACTIVITY

Stable and normally non-reactive, except with water-reactive products. Above 100°C phase separation and coagulation occurs.

At very high temperatures CO, CO₂, nitrogen oxides and possible HCN may occur.





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11- TOXICOLOGICAL INFORMATION

Skin: May cause irritation on longer contact.
Eyes: May cause irritation on longer contact.
Sensitisation: No data available.

12- ECOLOGICAL INFORMATION

Do not allow entry to ground water or waterways.
Eliminate from contaminated water with a flocculation precipitant.
Aquatic Toxicity: Fish toxicity LC50: >500mg/Kg
Purification Plants: Bacteria toxicity ECO: >10,000mg/Kg

13- DISPOSAL CONSIDERATIONS

Non-recoverable waste is subject to the Duty Of Care Of Waste Regulations, and should be disposed of according to local regulations.
Disposal Code Number: 070 299
Recommended cleaning agent: water

14- TRANSPORT INFORMATION

UN/IMDG Classification: Not classified as hazardous for transport under ADR, IMDG, IATA regulations
Protect against frost

15- REGULATORY INFORMATION

Characterisation as to EC Regulations :- None
Identification Letter and Hazard Symbols of the Product :- None
R-Phrases :- None
S-Phrases :- None
The product is not classified as hazardous and does not require labelling.
No restrictions and directives apply to this product.

16- OTHER INFORMATION

No other safety information applicable to this product.

It is recommended that all persons using this product be suitably trained in the use of relevant personal protective equipment.

No other safety information is applicable to the use of this preparation for its intended purpose.
This data sheet was compiled using information from raw material manufacturers, The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (as amended), the Approved classification and labelling guide (fifth edition) for supply, the Approved Supply List (eighth edition), EH40/2005 and the Approved Carriage List (third edition).





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1- IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product name: **AQUAGUARD PART B - HARDENER**

Supplier: Floortech Products
Goods Yard
Derby Road
Belper
Derbyshire
DE56 1UX

Phone: 01773 828111

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Product Description: Hardener for coating materials or adhesives for industrial and trade application

2- COMPOSITION/INFORMATION AND INGREDIENTS

Hydrophilic Aliphatic Polyisocyanate

Aliphatic Polyisocyanate

Wt. - %: ca. 100

CAS No: - -

Index No: - -

Hazard Symbol: Xi

EINECS No: - -

R-Phrases: 43-52/53

(classification according to definition principle)

Hexamethylene-1.6 – diisocyanate

Wt. -%: <0.15

CAS No: 822-06-0

Index No: 615-011-00-1

Hazard Symbol: T

EINECS No: 212-485-8

R-Phrases 23-36/37/38-42/43

Threshold concentration for hazard symbol T = from 2.0%

Threshold concentration for hazard symbol Xi = from 0.5%

3- HAZARD IDENTIFICATION

May cause sensitization by skin contact

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Contains isocyanates – see section 15 for information

4- FIRST AID MEASURES

Eye Splashes: Flush the affected eye with clean running water for at least 10 minutes and seek medical advice.

Skin Exposure: If soreness or irritation occurs as a result of skin exposure remove contaminated clothing and wash skin thoroughly with soap and water. Wash clothing before use. If symptoms persist seek medical advice.





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Ingestion (Swallowing): If material is accidentally swallowed do not induce vomiting and seek medical advice.

Inhalation: Move the patient to fresh air. If the patient is unconscious, place in the recovery position and seek medical attention immediately.

This information should be taken with the patient when seeking medical advice
Do not give victim anything to drink if he is unconscious

5- FIRE FIGHTING MEASURES

Use dry powder, CO₂, or foam. For larger fires water-spray should be used.
In the event of a fire, carbon monoxide, nitrogen oxides, isocyanate vapour, and traces of hydrogen cyanide. Fire fighters must wear self-contained breathing apparatus.
Do not allow contaminated extinguishing water to enter the soil, ground water or surface waters.

6- ACCIDENTAL RELEASE MEASURES

Do not empty into drains. Remove mechanically; cover the remainder with wet, absorbent material (e.g. sawdust, chemical binder based on calcium silicate hydrate, sand). After approx 1 hour transfer to waste container and do not seal (evolution of CO₂!). Keep damp in a safe ventilated area for several days. (for further disposal measures see chapter 13)

7- HANDLING AND STORAGE

Keep container dry and tightly closed in a cool and well ventilated place. Further information on storage conditions, which must be observed to preserve quality, can be found in our product data sheet.

VCI Storage Class: 12

(VCI: German Association of the Chemical Industry)

Ensure adequate ventilation or exhaust ventilation in the working area. Exhaust ventilation if product is sprayed. Avoid contact with skin and eyes.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION

UK maximum exposure limits (MEL) or Occupational Exposure Standards (OSE), per EH40 document (Health and Safety Executive):

Type	Substance	CAS No	8-hr TWA		15 min STEL	
Year			ppm	mg/m ³	ppm	mg/m ³
MEL	Isocyanates, all (as NCO)	---	---	0.02	---	0.07
2002			(+ can cause respiratory sensitization)			

Exposition assessment value (EBW) per TGRS 430:

Polyisocyanate content (HDI oligomers and/or prepolymers): 100%

Use an exposition assessment value of 0.5 mg/m³





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Wear suitable protective clothing, protective gloves and protective goggles/mask.
Suitable materials for safety gloves; DIN EN 374-3:
Butyl rubber – IIR: thickness $\geq 0.5\text{mm}$; breakthrough time $\geq 480\text{min}$.
Flourinated rubber – FKM: thickness $\geq 0.4\text{mm}$; breakthrough time $\geq 480\text{min}$.
Recommendation: contaminated gloves should be disposed of.

Respiratory protection required in insufficiently ventilated working areas and during spraying. An air fed mask, or for short periods of work a combination of charcoal filter and particulate filter is recommended.

In case of hypersensitivity of the respiratory tract (e.g. asthmatics and those who suffer from chronic bronchitis) it is inadvisable to work with the product.

Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at the end of work. Keep working clothes separate. Take off immediately all contaminated clothing.

9- PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Slightly Yellow Liquid
Odour: almost odourless
Density: 1.16 g/cm^3 at 20°C DIN EN ISO 28811
Flash Point: Above 250°C DIN EN 22719
Solubility: Insoluble; reacts as described in paragraph 10
Ignition Temperature: ca. 465°C
Setting point: ca. -15°C
Boiling point: not measurable (owing to decomposition)
Vapour pressure: $<0.0001 \text{ hpa}$ at 20°C
Hexamethylene – 1.6 – diisocyanate: 0.014 mbar at 25°C
Viscosity: ca. 2800 mPa at 23°C , DIN EN ISO 3219/A.3
pH value: not applicable
Remarks: The values for density and viscosity are guide values. Please see the product information sheet

10- STABILITY AND REACTIVITY

Hazardous decomposition products: No hazardous decomposition products when stored correctly.
Hazardous reactions: Exothermic reaction with amines and alcohols; reacts slowly with water forming CO_2 ; in closed containers risk of bursting due to increase of pressure.





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11- TOXICOLOGICAL INFORMATION

Acute toxicity:

LD₅₀ oral, rat: more than 2000 mg/kg

Skin and mucous membrane compatibility, rabbit:

Skin 4 hours exposure: slight irritant

Eyes: non-irritant

(OECD Guidelines for Testing of Chemicals, No.404 and No.405)

No pulmonary sensitisation observed in animal tests:

No pulmonary sensitisation potential was observed in the guinea pig model after either intradermal or inhalative induction with polyisocyanate based on hexamethylene diisocyanate

Skin sensitisation according to Buehler (epicutaneous test): In the guinea pig the product did not show a sensitizing effect.

(OECD Guidelines for Testing of Chemicals, No.406, 1977) *

Skin sensitisation according to Magnusson/Kligmann (maximising test):

In the guinea pig the product has a sensitising effect.

(OECD Guidelines for Testing of Chemicals, No.406)

Salmonella/microsome test (Ames test)

No indication of mutagenic effects

* Toxicological studies of a comparable product

Special properties/effects:

Over-exposure, especially when spraying coatings containing isocyanate without the necessary precautions entails the risk of concentration-dependent irritating effects on eyes, nose, throat, and respiratory tract.

Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hyper sensitive persons may suffer from these effects even at low isocyanate concentrations, including concentrations below the UK maximum Exposure Limit (MEL). Prolonged contact with the skin may cause tanning and irritant effects.

12- ECOLOGICAL INFORMATION

Biodegradability: 2%, i.e. not readily degradable

Degradation rate in 28 days.

(OECD Guidelines for Testing Chemicals, No.301 F)

Acute fish toxicity:

LC₀/LC₁₀ (geometric mean = 28.3 mg/l

Test species: Brachydanio rerio (Zebra barbel); duration of test: 96hrs

(OECD Guidelines for Testing Chemicals, No.203) *

Acute bacteria toxicity: EC₅₀ > 10,00 mg/l





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Tested on activated sludge micro organism; duration of test: 3hrs
(OECD Guidelines for Testing Chemicals, No.209) *

Acute toxicity for daphnia: $EC_{50} \geq 100\text{mg/l}$
Test species: Daphnia magna (water flea); duration of test: 48hrs
(OECD Guidelines for Testing Chemicals, No.202) *

Acute toxicity for algae: $EC_{50} \Rightarrow 100\text{mg/l}$
Tested on green algae (Desmodesmus subspicatus); duration of test: 72hrs
(OECD Guidelines for Testing Chemicals, No.201) * **

* Sample preparation on account of the reactivity of the substance with water: Ultra turrax: 60 sec, 8000rpm; 24h magnetic stirrer; filtration.

** Ecotoxicological reports on a comparable product

Remark:

On the basis of the data for ecotoxicological effects, the substance can be classified as harmful to aquatic organisms in the water-soluble range. As the compound is not readily biodegradable, long retention times in water are to be expected. This applies only in cases where no other elimination mechanisms (photodegradation, hydrolysis, adsorption) are active. In the case of discharge in to surface waters where emissions of longer duration result in concentrations in the region of the effective threshold at the outflow, damage to ecosystem cannot be excluded.
Do not allow to escape in to waterways, waste water or soil.

The product reacts with water at the interface forming CO_2 and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by water soluble solvents.

13- DISPOSAL CONSIDERATIONS

The relevant EC directives and local, regional and national regulations must be complied with.

May be incinerated in a suitable facility provided local regulations are observed.

For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

After final product withdrawal, all residues must be removed from containers (drip-free, powder-free or paste-free). Once the product residues adhering to the walls of the containers have been rendered harmless, the product and hazard labels must be invalidated. Containers must be recycled in compliance with national legislation and environmental regulations.





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14- TRANSPORT INFORMATION

GGVSee/IMDG code: -- UN No: -- EmS: --
PG: -- MPO: --
GGVSE: Class -- PG: -- RID/ADR: Class -- PG: --
ADNR: Class -- PG: -- Cat - - ICAO/IATA-DGR: not restr
Declaration for land shipment: --
Declaration for sea shipment: --
Declaration for shipment by air: --
Other information:
Not dangerous cargo. Keep dry. Avoid heat above +50°C. Keep away from foodstuffs, acids, alkalis.

15- REGULATORY INFORMATION

Labelling as required by the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3), in accordance with EC directives:
Symbol: Xi. Hazard description: irritant.
Contains isocyanates. See information supplied by the manufacturer.
R43: May cause sensitisation by skin contact.
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S24: Avoid contact with skin
S37: Wear suitable gloves.
S61: Avoid release to the environment. Refer to special instruction/Safety Data Sheet.

The manufacturer's information on the handling of isocyanate is contained in this Safety Data Sheet.

The European Committee of Paint, Printing Ink and Artists' Colours Manufacturers Association (CEPE) provides the following information on coatings containing isocyanates:
Ready-to-use paints containing isocyanates may have an irritant effect on mucous membranes, especially on breathing organs, and cause hypersensitivity reactions. Inhalation of vapour or spray mist may cause sensitisation. When handling paints containing isocyanates all precautions required for solvent-containing paints must be followed. Vapour and spray mist in particular should not be inhaled. Persons who are allergic, asthmatic, or prone to respiratory ailments should not work with isocyanate-containing paints.

Any existing national regulations on the handling of isocyanates must be observed.

Not subject to the German Regulation on Flammable Liquids (VbF)

Airborne emissions must be controlled within local and national limits, in accordance with the appropriate legislation.
Hexamethylene-1.6-diisocyanate=

Water pollution class (WKG): 1, slight hazardous to water.
WGK = Classification in accordance with the German Water Resource Act
(in accordance with Annex3 to the Directive on Water-Hazardous Substances)





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16- OTHER INFORMATION

The product is used mainly as a hardener in coating materials or adhesives. The handling of coating materials or adhesives containing reactive polyisocyanates and residual monomeric HDI requires appropriate protective measures referred to in this Safety Data Sheet. These products may therefore be used only in industrial or trade applications. They are not suitable for use in homemaker (DIY) applications.

All components of this product are listed in the European Inventory of Existing Commercial Substances (EINECS) under the provisions laid down in the corresponding EC directive.

Swiss Law of poison: class of poison free; BAG-T-No.614300

Text of all R phrases referred to in Chapters 2 and 3:

- R23: toxic by inhalation
- R36: Irritating to the eyes
- R37: Irritating to respiratory system
- R38: Irritating to the skin
- R42: May cause sensitisation by inhalation
- R43: May cause sensitisation by skin contact.
- R52: Harmful to aquatic organisms
- R53: May cause long-term adverse effects in the aquatic environment.

This safety data sheet contains alterations, as follows: inclusion of TRGS (Technical Regulation on Hazardous Substances) classification 430, see Chapters 1, 8, 15 and 16)

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

